DTC	B1417/17	Rear Evaporator Temperature Sensor Circuit

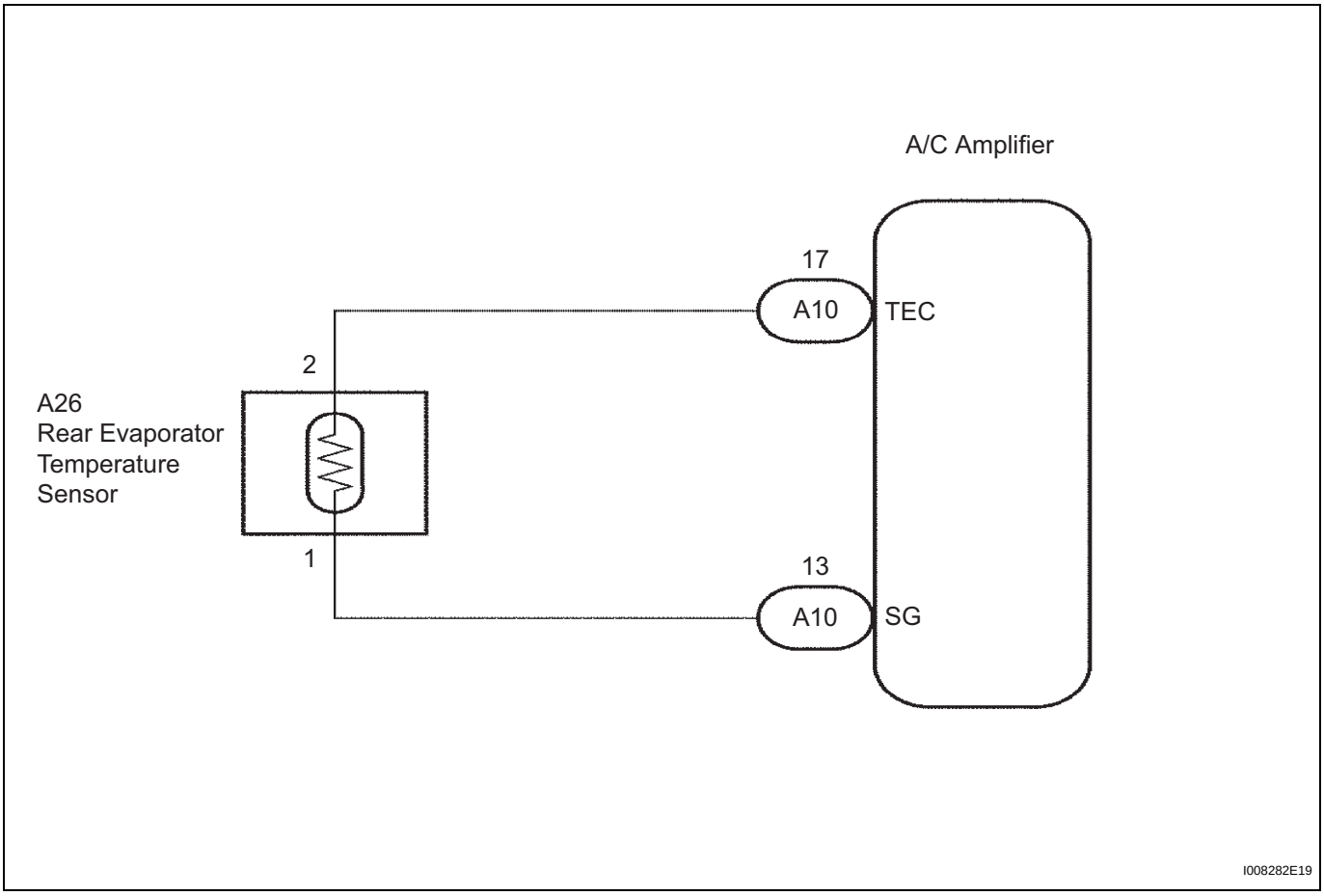
DESCRIPTION

The rear evaporator temperature sensor is installed on the rear evaporator. It detects the rear evaporator temperature. The sensor sends a signal to the A/C amplifier. The resistance of the rear evaporator temperature sensor changes in accordance with the rear evaporator temperature. As the temperature decreases, the resistance increases. As the temperature increases, the resistance decreases.
The A/C amplifier applies voltage (5 V) to the rear evaporator temperature sensor and reads voltage changes as the resistance of the rear evaporator temperature sensor changes.

AC

DTC No.	DTC Detection Condition	Trouble Area
B1417/17	Open or short in rear evaporator temperature sensor circuit	• Rear evaporator temperature sensor • Harness or connector between rear evaporator temperature sensor and A/C amplifier • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position and turn the intelligent tester main switch on.

(c) Select the item below in the DATA LIST, and read the display on the intelligent tester.

DATA LIST / AIR CONDITIONER:

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
R-EVAP TEMP SEN (Rear evaporator temperature sensor)	Rear evaporator temperature sensor / min: -29.7°C (-21.46°F), max: 59.55°C (139.19°F)	Actual rear evaporator temperature is displayed	-

OK:

The display is as specified in the normal condition column.

AC

Result

Result	Proceed to
NG	A
OK (When troubleshooting according to the PROBLEM SYMPTOMS TABLE)	B
OK (When troubleshooting according to the DTC)	C

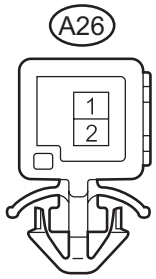
B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE**

C → **REPLACE A/C AMPLIFIER**

A

2 INSPECT REAR EVAPORATOR TEMPERATURE SENSOR

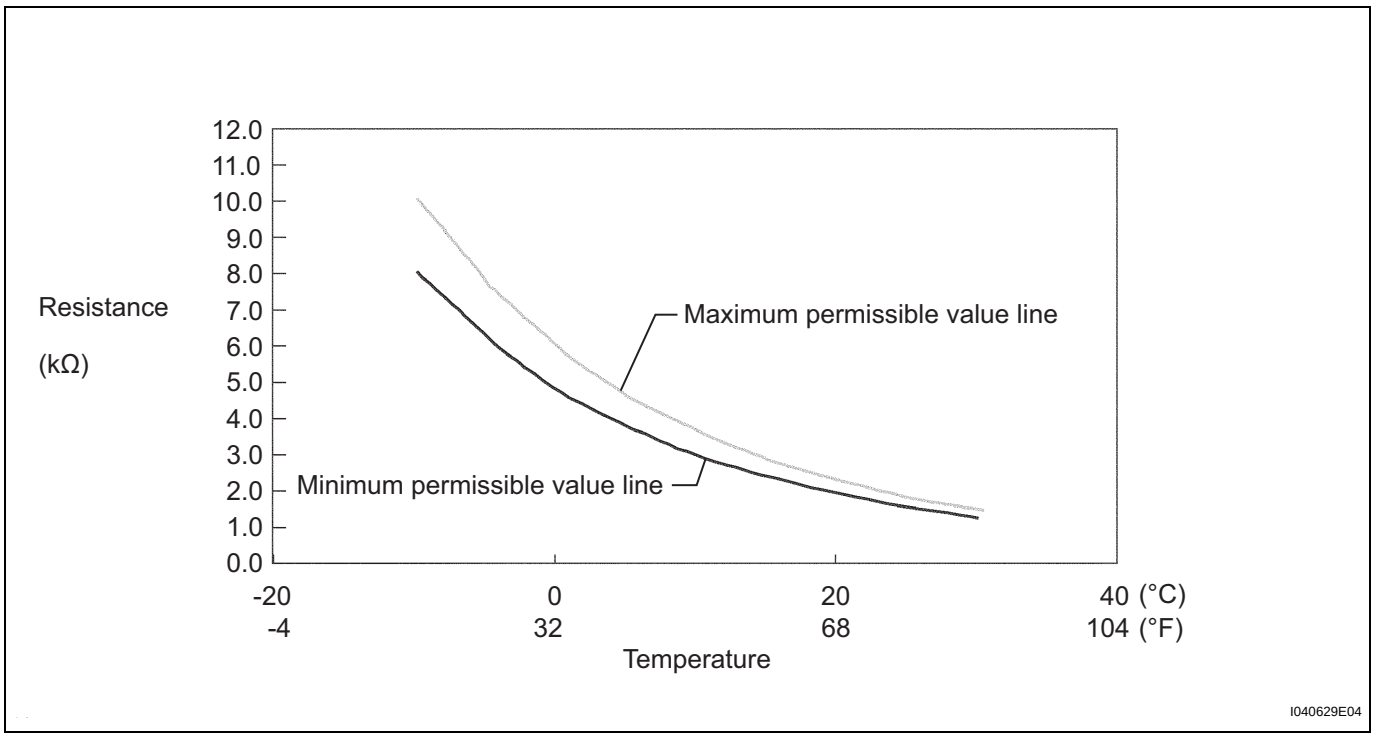
Component without harness connected:
(Rear Evaporator Temperature Sensor)



H

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(a) Remove the rear evaporator temperature sensor.
(b) Measure the resistance according to the value(s) in the table below.



Standard resistance

Tester Connection	Condition	Specified Condition
A26-1 - A26-2	-10°C (14°F)	7.40 to 9.20 kΩ
A26-1 - A26-2	-5°C (23°F)	5.65 to 7.00 kΩ
A26-1 - A26-2	0°C (32°F)	4.35 to 5.40 kΩ
A26-1 - A26-2	5°C (41°F)	3.40 to 4.20 kΩ
A26-1 - A26-2	10°C (50°F)	2.68 to 3.30 kΩ
A26-1 - A26-2	15°C (59°F)	2.10 to 2.60 kΩ
A26-1 - A26-2	20°C (68°F)	1.66 to 2.10 kΩ
A26-1 - A26-2	25°C (77°F)	1.32 to 1.66 kΩ
A26-1 - A26-2	30°C (86°F)	1.05 to 1.35 kΩ

NOTICE:

- **Even slightly touching the sensor may change the resistance value. Be sure to hold the connector of the sensor.**
- **When measuring, the sensor temperature must be the same as the rear evaporator temperature.**

HINT:

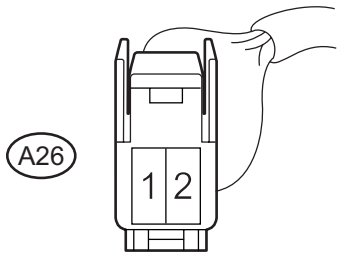
As the temperature increases, the resistance decreases (see the graph).

NG → **REPLACE REAR EVAPORATOR TEMPERATURE SENSOR**

OK

3	CHECK HARNESS AND CONNECTOR (REAR EVAPORATOR TEMPERATURE SENSOR - A/C AMPLIFIER)

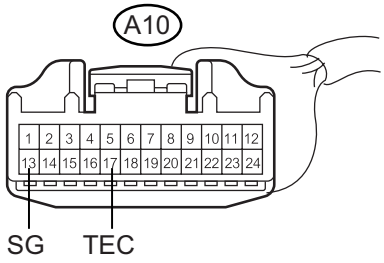
Front view of wire harness connector:
(to Rear Evaporator Temperature Sensor)



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(a) Disconnect the rear evaporator temperature sensor connector.

Front view of wire harness connector:
(to A/C Amplifier)



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(b) Disconnect the A/C amplifier connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
A26-2 - A10-17 (TEC)	Always	Below 1 Ω
A26-1 - A10-13 (SG)	Always	Below 1 Ω
A10-17 (TEC) - Body ground	Always	10 kΩ or higher
A10-13 (SG) - Body ground	Always	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE A/C AMPLIFIER